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The Website for Graph Visualization Software References (GVSR)

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Abstract. Graph drawing software are now commonly used. However, the choice of a well-adapted program may be hard for an inexperienced user. This poster presents a website (<http://www.polytech.univ-nantes.fr/GVSR/>) built to help users choose a program adapted to their problems. So far, this site uniformly presents fifty programs and aims at helping users both in their choices and in comparing the programs.

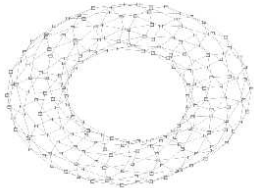
The current profusion of available graph drawing programs lets the non-specialist user often confused. Some programs have been developed in close partnership with the scientific community (*e.g.* Pajek for social networks). But generally speaking, the choice of a program well-adapted to both the data and the methodology remains difficult for a user expert in his field but not in graph drawing. Recent books can be used as guides [1,2], and several websites present lists of general or specialized programs [3,4,5] or synthetic views of different types of layouts [6]. However, either the information is too complex for a non-specialist or it is presented incompletely or in a heterogeneous form uneasy to explore. Consequently much effort is required to compare the various programs.

Those restrictions led us to develop a website called “*Graph Visualization Software References*” (<http://www.polytech.univ-nantes.fr/GVSR/>). Built as a directory, it presents the programs with a uniform text-based description along with a screenshot. This site keeps evolving and so far contains about fifty various software descriptions classified into five types: libraries, visualization tools, knowledge representation, 3D only tools, and specific tools. Our objectives are to facilitate the users’ choices and to compare programs with common criteria.

Each program has its own description card (Fig. 1) made of a screenshot, general information (*e.g.* author(s)’ name, website, ...), specific information on the visualization (*e.g.* possible uses, graph type(s), ...), technical information (*e.g.* operating system(s), license(s), ...) and references (*e.g.* publication(s), website(s)). Each card is described by an XML file. The files are managed with the native XML database “*Exist*”. Some of the existing functionalities are an automatic indexing of the data and an organization of the XML files in collections like in a computer hard-disk. The communication with the user’s web browser is done with the *Apache Tomcat* servlet container via “*JavaServer Pages* (JSP)”. This technology allows to easily create websites with a dynamic content independent from the server and client architectures. In addition, the site allows users

to propose new programs by simply completing an enclosed form. Finally, the site has an XQUERY-based search engine.

Aisee



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General software information

Type
Visualization Tools

Author
Absint

Website
<http://www.aisee.com/>

Presentation
This software automatically calculates a customizable layout of graphs.

Graph type
2D or 3D
2D graph, 3D graph

Graph size
Less than 1000 nodes

Graph Type
*

Field

mathematical modelling, diagram,...

Possible uses

Software Visualization, Experiencing Program Analysis, Worst-Case Execution Time Analyses, Visualization of IRC Networks, Hypertext Linkage Visualization, Network Visualization, XML Tree Visualizer.

Software characteristics

Handling
See the online documentation

Interactivity with the graph
Exploration of the layout

Technical aspects

Software size
2 Mo for Linux and 3 Mo for Windows

Development language
C

Operating system
Windows, Linux, Solaris, SunOS, NetBSD, Mac os

Main references

Article
*

Website
*

Cost and license

Cost and license
Free for non-commercial purposes

Download link
<http://www.absint.com/aisee/download/>

Fig. 1. Example of a software description card.

The content of the site keeps evolving by the addition of new programs and new functionalities. We are currently working on a benchmark for comparing different programs on the same graph base. However, as the graph description format is different for each program, we are working on a format converter *via* the Graph Exchange Language (GXL) [7].

References

1. Kaufmann, M., Wagner, D., eds.: Drawing Graphs: Methods and Models. Volume 2025 of LNCS. Springer (2001)
2. Mutzel, P., Jünger, M.: Graph Drawing Software. Springer Verlag (2003)
3. <http://rw4.cs.uni-sb.de/users/sander/html/gstools.html>.
4. http://directory.google.com/Top/Science/Math/Combinatorics/Software/Graph_Drawing.
5. <http://www.dia.uniroma3.it/research/ACG.html>.
6. <http://www.visualcomplexity.com/vc/index.cfm>.
7. Winter, A.: Exchanging graphs with GXL. In Mutzel, P., Jünger, M., Leipert, S., eds.: Graph Drawing: 9th Int. Symp. (GD'01). Volume 2265 of LCNS. Springer (2002) 485–500